

# Apache APA

- Gravity **12.4 BLG**
- ABV ---
- IBU **19**
- SRM **12.1**
- Style **American Amber Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **24.4 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

## Steps

- Temp **68 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | pils                        | 4 kg (92.8%)   | 80.5 % | 4    |
| Grain | Karmelowy Czerwony          | 0.2 kg (4.6%)  | 75 %   | 59   |
| Grain | zakwaszający                | 0.06 kg (1.4%) | 80 %   | ---  |
| Grain | Strzegom Czekoladowy ciemny | 0.05 kg (1.2%) | 68 %   | 1200 |

## Hops

| Use for             | Name  | Amount | Time   | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil                | perle | 8 g    | 60 min | 7.5 %      |
| Boil                | perle | 8 g    | 30 min | 7.5 %      |
| Boil                | lunga | 10 g   | 15 min | 11 %       |
| Aroma (end of boil) | lunga | 10 g   | 0 min  | 11 %       |
| Whirlpool           | lunga | 10 g   | 0 min  | 11 %       |

## Yeasts

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale  | Slant | 180 ml | ---        |